UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/845,179	05/01/2001	Mitsuhiro Nada	205007US-2	2561

22850   7590   06/29/2004

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER
TRAN, DALENA

ART UNIT	PAPER NUMBER
3661	

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _24 March 2004_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-51_ is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-51_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Notice to Applicant(s)

1.   This office action is responsive to the amendment filed on 3/24/04. As per request,

claims 1,16,20-21,28-31, and 51 have been amended. Thus, claims 1-51 are pending.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

3.   Claims 1-51, are rejected under 35 U.S.C.103(a) as being unpatentable over Kamiya et al.

(5,111,686) in view of Takaba et al. (5,506,773).

As per claims 1,25-26,29-30, and 48-49, Kamiya et al. disclose an abnormality diagnostic

system capable of storing on a vehicle abnormality diagnostic data used for abnormality

diagnosis corresponding to an abnormal event when an abnormality is detected in the vehicle,

comprising: a common data storing section for storing as the abnormality diagnostic data for a

plurality of abnormal events, common data which is common irrespective of the detected

abnormal events, the common data includes data indicative of a behavior of the vehicle (see

column 3, lines 4-32; column 4, lines 6-18; and lines 24-29, from "With reference..........to

period of time"), an inherent data storing section for storing in correspondence to the common

data inherent data which is associated with the abnormal events detected, inherent data includes

data of a component which relates to the abnormal event (see columns 4-5, lines 46-45, from

"Diagnosis items......... to FIGS. 3A and 3B"). Kamiya et al. do not disclose inherent data

specific to a diagnostic code. However, Takaba et al. disclose an inherent data storing section for storing inherent data which is specific to a diagnostic code for the abnormal events detected (see column 5, lines 1-6; column 5, lines 36-57, from "FIG.8......... to stored"; and column 7, lines 9-44). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Kamiya et al., by combining storing inherent data which is specific to a diagnostic code for the abnormal events detected to determine a type of the malfunction to prevent the data being erroneously read out during analysis system performance.

As per claims 2, and 31, Kamiya et al. disclose storing the abnormality diagnostic data (see column 1, lines 35-50), judging an abnormal event when the abnormality is detected (see column 2, lines 3-26), selecting the inherent data corresponding to the judged abnormal event (see column 4, lines 46-57, from "Diagnosis........to microcomputer"), and writing the selected inherent data together with the common data to the storing as the abnormality diagnostic data corresponding to the abnormal event (see columns 4-5, lines 58-27).

As per claims 3,10,32, and 39, Kamiya et al. disclose common data includes data indicative of behavior of the vehicle (see column 3, lines 4-32; column 4, lines 24-29, from "With reference.............to period of time").

As per claim 40, Kamiya et al. disclose a data length of the inherent data is constant irrespective of a difference in the abnormal events (see column 5, lines 25-45).

As per claims 4-5,11-15,33-34,37, and 41-44, Kamiya et al. disclose the inherent data includes a plurality of data, and data length of each data is constant irrespective of a difference in the abnormal events (see column 5, lines 25-45).

As per claims 6, and 35, Kamiya et al. disclose a common storing region in which each of the inherent data can be commonly stored (see column 1, lines 35-50), and writes the inherent data to the common storing region (see columns 4-5, lines 58-27).

As per claim 7, Kamiya et al. disclose common data includes data indicative of behavior of the vehicle (see column 3, lines 4-32; and column 4, lines 24-20, from "With ....to period of time").

As per claims 8,9,36, and 38, Kamiya et al. disclose the inherent data includes a plurality of data, and data length of each data is constant irrespective of a difference in the abnormal events (see column 5, lines 25-45).

Claim 16 is a method claim corresponding to system claims 1-2 above. Therefore, it is rejected for the same rationales set forth as above.

Claims 17-19 are method claims corresponding to system claims 1-2 above. Therefore, they are rejected for the same rationales set forth as above.

As per claim 20, Kamiya et al. disclose an abnormality diagnostic system capable of storing on a vehicle abnormality diagnostic data used for abnormality diagnosis corresponding to an abnormal event when an abnormality is detected in the vehicle, comprising: a common data storing section for storing as the abnormality diagnostic data for a plurality of abnormal events, common data which is common irrespective of the detected abnormal events, the common data includes data indicative of a behavior of the vehicle (see column 3, lines 4-32; column 4, lines 6-18; and lines 24-29, from "With reference..........to period of time"), an inherent data storing section for storing in correspondence to the common data inherent data which is associated with the abnormal events detected, inherent data includes data of a component which relates to the

abnormal event (see columns 4-5, lines 46-45, from "Diagnosis items......... to FIGS. 3A and

3B"). Kamiya et al. do not disclose inherent data specific to a diagnostic code. However,

Takaba et al. disclose an inherent data storing section for storing inherent data which is specific

to a diagnostic code for the abnormal events detected (see column 5, lines 1-6; column 5, lines

36-57, from "FIG.8......... to stored"; and column 7, lines 9-44), and a processor configured to

identify the detected abnormal events with a diagnostic code (see the abstract, lines 16-20, from

"A CPU.......to diagnostic data"). It would have been obvious to one of ordinary skill in the art

at the time the invention was made to modify the teach of Kamiya et al., by combining storing

inherent data which is specific to a diagnostic code for the abnormal events detected to determine

a type of the malfunction to prevent the data being erroneously read out during analysis system

performance.

Claim 21 is method claim corresponding to system claim 20 above. Therefore, it is

rejected for the same rationales set forth as above.

As per claims 22, and 45, Kamiya et al. disclose the common data and the inherent data

corresponding to detected abnormal events are stored in the common data storing section and the

inherent data storing section respectively, as long as there are unused memory location in the

common data storing section and the inherent data storing section (see column 1, lines 35-50;

and column 2, lines 3-26).

As per claims 23-24, and 46-47, Kamiya et al. disclose common and inherent data

corresponding to a first abnormal event is stored in a first memory area which is different from a

second memory area in which the common and inherent data corresponding to a second

abnormal event, and common and inherent data corresponding to successively occurring and

substantially same abnormal events, are stored in the common data and inherent data storing section for each of the substantially same abnormal events (see column 5, lines 25-45).

As per claims 27 and 50, Kamiya et al. do not disclose inherent and common data are stored in an order. However, Takaba et al. disclose the inherent and common data corresponding to successively detected abnormal events are stored in an order in which the abnormal events are detected (see column 5, lines 37-57, from "FIG.8...........to stored"). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Kamiya et al. by combining the inherent and common data corresponding to successively detected abnormal events are stored in an order in which the abnormal events are detected for perform a necessary specific work procedure sequentially according to the priority of abnormal diagnostic.

As per claims 28 and 51, Kamiya et al. do not disclose numbers or symbols corresponding to the order are stored. However, Takaba et al. disclose in addition to storing data corresponding to abnormalities in an order in which the abnormalities are detected, numbers or symbols corresponding to the order are also stored together with a diagnostic code and a freeze frame data as the inherent data (see column 7, lines 9-44). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Kamiya et al. by combining numbers or symbols corresponding to the order are also stored together with a diagnostic code and a freeze frame data for identifying the portion which has generated the abnormal signal and a value of the abnormal signal.

Remarks

4.   Applicant's argument filed on 3/24/04 has been fully considered. Upon updated search,

the new ground of rejection has been set forth as above.

        Applicant's argue in page 13 of the amendment about Kamiya et al. do not disclose of

storing in correspondence to common data inherent data associated with and specific to a

diagnostic code for the abnormal event detected. In reviewing the Kamiya et al. reference,

Kamiya et al. disclose an inherent data storing section for storing in correspondence to the

common data inherent data which is associated with the abnormal events detected (see columns

4-5, lines 46-45, from "Diagnosis items.........FIGS. 3A and 3B"). In this cited columns, in

column 4, lines 46-53, from "Diagnosis items..........sensor 13", Kamiya et al. disclose inherent

data (abnormality that the output of the water temperature sensor 20 changes rapidly at a speed

higher than a permitted speed, abnormality that the output amplitude of the O2 sensor 13 drops

lower than a predetermined value, and abnormality of being immovable of the air fuel ratio

feedback value based on output of the O2 sensor 13), these data correspondence to the common

data (a water temperature, the air fuel ratio from output signal of the O2 sensor) are stored in the

memory (columns 4-5, lines 58-45).   Kamiya et al. do not disclose inherent data specific to a

diagnostic code. However, Takaba et al. disclose an inherent data storing section for storing

inherent data which is specific to a diagnostic code for the abnormal events detected (see column

5, lines 1-6; column 5, lines 36-57, from "FIG.8.........stored"; and column 7, lines 9-44), as

cited in item 3 above. Therefore, Kamiya et al., and Takaba et al. disclose the limitation of

claim 1, "an inherent data storing section for storing in correspondence to the common data

inherent data which is associated with and specific to a diagnostic code for the abnormal events

detected.

5.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Dalena Tran whose telephone number is 703-308-8223. The

examiner can normally be reached on M-F (7:30 AM-5:30 PM), off every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Thomas Black can be reached on 703-305-8233. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner
Dalena Tran

June 24, 2004